

MINAPIG – A MULTI-COUNTRY PROJECT TO EVALUATE ALTERNATIVES TO ANTIMICROBIAL USAGE IN PIG PRODUCTION



Katharina DC Stärk¹, Margit Andreassen², Catherine Belloc³, Jeroen Dewulf⁴, Elisabeth grosse Beilage⁵, Christina Gawron⁶, Ann Lindberg⁷, Hugo Seemer⁸, Vivianne Visschers⁹, Ulf Emanuelson¹⁰

¹SAFOSO AG, Bern, Switzerland katharina.staerk@safoso.ch; ²Danish Agricultural and Food Council, Copenhagen, Denmark; ³ONIRIS, Nantes, France; ⁴Ghent University, Ghent, Belgium; ⁵University of Veterinary Medicine, Hannover, Germany; ⁶GIQS e.V., Bonn, Germany; ⁷National Veterinary Institute, Uppsala, Sweden; ⁸Boehringer Animal Health, Ingelheim am Rhein, Germany; ⁹ETH Zurich, Institute for Environmental Decisions (IED), Consumer Behavior, Zurich, Switzerland; ¹⁰Swedish University of Agriculture, Uppsala, Sweden

Introduction

Statistics on the use of antimicrobials in pig farming in Europe indicate that the extent of usage may be larger than assumed. It also varies considerably between countries, among prescribing veterinarians and individual pig farmers. In order to progress towards corrective action, differences in the extent of antimicrobial use and the reasons to use them between farms and countries need to be explained.

Antimicrobials are used when livestock are affected by pathogens in an environment that does not prevent disease. “Prevention is better than cure” is the European Commission’s motto in its animal health strategy. Because many management factors can impact on antimicrobial usage on a farm, it is difficult to identify individual factors that are consistently and strongly correlated with reduced antimicrobial use.

Important factors determining prescription and usage patterns in farmers and veterinarians may be different knowledge levels, beliefs, attitudes, and perceived risks. There are indications that differences between countries, e.g. health status, ethical values and financial concerns influence prescribing or usage behaviour. In order to effectively implement policies on limited antimicrobial use, a thorough understanding of factors affecting behaviour will be critical.

Objectives

MINAPIG research pursues a vision of sustained animal health by investigating strategies that promote pig health and thus lead to a reduced need for antimicrobial use. Our specific objectives are to

- 1) Assess the efficacy and effectiveness of specific and unspecific technical alternatives to antimicrobial usage in pig production, including biosecurity and vaccination
- 2) Develop models of farmers’ and veterinarians’ attitudes and motivation and to assess how they are associated with usage in different countries



Workplan

The workplan is shown in Figure 1. Field studies are conducted in the participating European countries to investigate and compare different farming practices with the amount of antimicrobials used. Economical evaluations will establish the relative costs and benefits from alternative strategies. Attitudes of farmers and veterinarians towards antimicrobial usage and alternative preventive strategies are investigated to compare between farmers and veterinarians within and between countries.

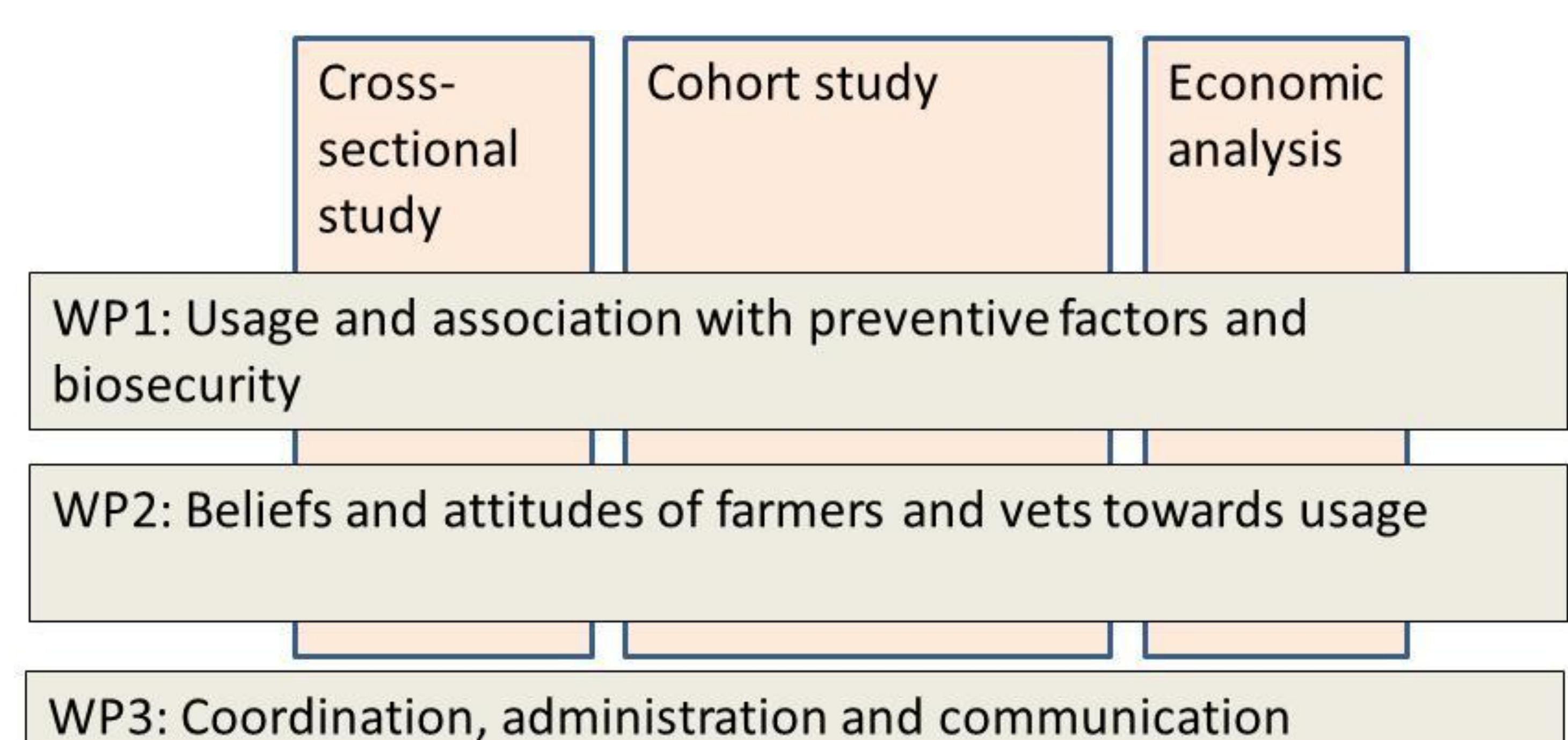


Figure 1: Work plan of MINAPIG research over the 3-year project period.

The participating countries (Belgium, Denmark, France, Germany, Sweden, Switzerland) differ substantially regarding the nature and structure of the pig industry and farming in general. Results should therefore also capture the variability within Europe.

MINAPIG research will provide the foundation for an integrated understanding of technical and psychological factors driving decisions of farmers and veterinarians about pig health and production and the consequential interventions, particularly the use of antimicrobials across different pig production practices in Europe.

Stay in touch

MINAPIG started in April 2012 and will run for three years. There will be a conference in the last year to present MINAPIG results. If you would like to receive updates on MINAPIG research, please visit www.minapig.eu